Q1. Choose the Correct Answer:

1. What is meant by a computer network?

a) A program for storing data. b) A group of connected devices to exchange data.
c) An output device. d) An operating system.

2. Which of the following is an example of a Local Area Network (LAN)?

a) The Internet. b) An international network.
c) A network of devices within a single building. d) A satellite networks.

3. Which of the following is considered a wireless communication medium?

a) Fiber optic cable. b) Copper cable.
c) Wi-Fi. d) Ethernet.

4. Which connection type features the highest data transfer speed?

a) Coaxial cable. b) Bluetooth.
c) Infrared. d) Fiber optics.

5. What is the function of an IP address?

a) Identifying the website name. b) Identifying the location of a device on the network.
c) Increasing internet speed. d) Data protection.

6. An IPv4 address consists of:

a) 2 numbers only. b) 4 groups of numbers.
c) 6 groups of letters. d) One long number.

7. A network that covers a large geographical area is called:

a) LAN b) MAN
c) PAN d) WAN

8. In a Peer-to-Peer model, devices are:

a) Linked to a main server. b) Unable to share files.
c) Equal in permissions/privileges. d) Connected to the internet only.

9. Bluetooth technology is most commonly used for:

a) Global networks. b) Connecting short-range devices.
c) Communication via cables. d) Server networks.

10. One of the disadvantages of wireless communication is:

a) Ease of use. b) Flexibility.
c) Low cost. d) Susceptibility to interference (noise).

11. Which of the following is a correct example of an IP address?

a) www.google.com b) 192.168.1.1
c) google@com d) http://site

12. What is the benefit of Domain Names?

a) Replacing an IP address with an easy-to-remember name. b) Data encryption.
c) Increasing storage capacity. d) Preventing internet connection.

13. Which network model relies on a central main server?

a) Peer to Peer
b) LAN
c) Client / Server
d) PAN

14. One of the benefits of using networks is:

a) Increasing data size.
b) Sharing resources and information.
c) Reducing device efficiency.
d) Preventing data exchange.

15. Which of the following is a wired communication method?

a) Wi-Fi
b) Bluetooth
c) Infrared
d) Fiber optic cable

16. Wired connection is preferred because it is:

a) Less secure.
b) Slow.
c) More stable and secure.
d) Affected by interference.

17. Which of the following is a Domain Name?

a) 172.16.0.1
b) 255.255.255.0
c) www.moe.gov.eg
d) 10.0.0.5

18. The server responsible for converting a domain name into an IP address is:

a) Web Server
b) File Server
c) DNS Server
d) Mail Server

19. What is meant by a communication protocol?

a) A device to strengthen the network.
b) A set of rules that govern the exchange of data.
c) A web browsing program.
d) A type of cable.

20. Which protocol is used for communication over the Internet?

a) HDMI
b) USB
c) TCP/IP
d) VGA

21. A database is:

a) A collection of unordered files.
b) A word processing program.
c) An external storage device.
d) An organized collection of data.

22. The primary goal of using databases is:

a) Data redundancy (repetition).
b) Difficulty in accessing information.
c) Ease of storing and retrieving data.
d) Increasing file sizes.

23. The IP protocol is responsible for:

a) Encrypting data.
b) Identifying the device address on the network.
c) Displaying web pages.
d) Sending emails.

24. The importance of communication protocols lies in being:

a) Optional.
b) Used in small networks only.
c) Essential for successful communication between devices.
d) Responsible for increasing data size.

25. A Database Management System (DBMS) is:

a) A computer hardware. b) A programming language.
c) A software program to manage databases. d) An operating system.

26. Which of the following is an example of a Database Management System?

a) Microsoft Access b) Google Chrome
c) Microsoft Word d) Windows

27. The TCP protocol is responsible for:

a) Identifying the device address. b) Ensuring data arrives complete and in order.
c) Translating domain names. d) Encrypting data.

28. Which statement is true regarding communication protocols?

a) They differ from one user to another. b) They are unnecessary in networks.
c) They organize the communication process between devices.
d) They are used in computers only.

29. Which of the following is an example of a database?

a) A picture. b) A video.
c) An organized data table. d) An audio file.

30. One of the advantages of databases is:

a) Difficulty in updating data. b) Information redundancy.
c) Easy loss of data. d) Speed of searching and editing.

31. What is meant by a Table in a database?

a) A group of programs b) A collection of related records
c) An image file d) A storage device

32. A column in a database table is called a:

a) Record b) Field
c) Key d) Form

33. A row in a database table is called a:

a) Field b) Form
c) Record d) Query

34. Which of the following is used to distinguish between records within a table?

a) Field b) Form
c) Primary Key d) Query

35. The Primary Key is:

a) A field that repeats in the table b) A field that uniquely identifies each record
c) A data entry form d) A search query

36. Which of the following is an example of a field in a Students table?

a) Students' data b) A single student
c) Seat number (ID) d) Results table

37. What is the function of Forms in databases?

a) Storing data
b) Easily entering and viewing data
c) Deleting tables
d) Creating networks

38. Which element is used to display data in an organized manner on the screen or for printing?

a) Table
b) Report
c) Primary Key
d) Field

39. Which of the following is an example of a record?

a) Name column
b) A row containing one student's data
c) Table name
d) Data type

40. The appropriate data type for storing a name is:

a) Number
b) Date
c) Text
d) Logical (Boolean)

41. One of the conditions for a Primary Key is that it must be:

a) Repeatable
b) Sometimes empty (Null)
c) Unique and non-repeatable
d) Text type only

42. Reports are used for:

a) Entering data
b) Modifying tables
c) Displaying data in a formatted layout
d) Creating databases

43. What is meant by an algorithm?

A) A programming language
B) A computer device
C) A set of ordered steps to solve a problem
D) A ready-made program

44. One of the characteristics of a correct algorithm is that it:

A) Is not ordered
B) Has no defined end
C) Is clear and well-defined
D) Depends on a specific device

45. Which of the following is an example of an algorithm?

A) Turning on the computer
B) Steps to prepare a cup of tea
C) The keyboard
D) The operating system

46. Algorithms are usually written using:

A) Images only
B) Sounds
C) Verbal or symbolic steps
D) Input devices

47. The first step in solving any problem using algorithms is:

A) Writing the program
B) Understanding the problem
C) Testing the solution
D) Implementing the solution

48. One of the conditions of a good algorithm is that it:

A) Is complicated
B) Cannot be executed
C) Has a beginning and an end
D) Is very long

49. Which of the following is considered a benefit of algorithms?

A) Organizing thinking
B) Facilitating writing programs
C) Increasing solution errors
D) Solving problems in a systematic way

50. An algorithm can be represented using:

A) Flowcharts
B) Keyboard
C) Mouse
D) Screen

51. The correct order of algorithm steps should be:

A) Random
B) Unclear
C) Logical and sequential
D) Always changing

52. Which of the following is used to represent an algorithm graphically?

A) Table
B) Flowchart
C) Database
D) Text file

53. A good algorithm should give:

A) The same result every time for the same inputs
B) Different results
C) Unknown results
D) Random results

54. Before converting an algorithm into a program, you should:

A) Turn on the computer
B) Test the algorithm
C) Delete the steps
D) Change the problem

55. What is meant by Programming?

a) Using a computer
b) Writing commands in a language the computer understands
c) Running programs
d) Browsing the Internet

56. A Program is:

a) An electronic device
b) A set of instructions that perform a specific task
c) An image file
d) A database

57. A Programming Language is:

a) Human language
b) A means of communication between the user and the computer
c) A set of rules for writing computer commands
d) An operating system

58. One of the benefits of learning programming is:

a) Increasing the size of the device
b) Solving problems in an organized way
c) Reducing computer speed
d) Preventing Internet use

59. Which of the following is an example of a programming language?

a) Windows
b) Python
c) Google
d) Excel

60. A Programmer is a person who:

a) Only uses a computer
b) Writes programs using a programming language
c) Repairs computer hardware
d) Manages networks

61. Before writing a program, you must:

a) Turn on the computer
b) Understand the problem well
c) Save the data
d) Install the system

62. The next step after writing a program is:

a) Understanding the problem
b) Executing and testing the program
c) Shutting down the computer
d) Deleting the code

63. A programming language is used to:

a) Write letters
b) Give commands to the computer
c) Draw pictures
d) Store files only

64. A good program should be:

a) Complex
b) Unclear
c) Error-free (Bug-free)
d) Very long

65. Which of the following is NOT a programming language?

a) Java
b) Python
c) HTML
d) Windows

66. Program testing aims to:

a) Increase code size
b) Discover and correct errors (Debugging)
c) Delete commands
d) Change the programming language

67. A variable in programming is used to:

a) Start the computer
b) Store a value that can be changed
c) Write texts
d) Design pages

68. Generative AI relies on:

a) Storage only
b) Probabilistic modeling and prediction
c) Manual input
d) Traditional programming only

69. The language responsible for building the structure of a web page is:

a) CSS
b) JavaScript
c) HTML
d) Python

70. CSS is used for:

a) Running the server
b) Designing the layout/appearance of the web page
c) Storing data
d) Writing text only

71. Assigning a value to a variable means:

a) Deleting the variable
b) Giving the variable a specific value
c) Printing the variable
d) Running the program

72. Generative AI does NOT rely on:

a) Big Data
b) Statistical prediction
c) Real human consciousness/perception
d) Learning from data

73. The <h1> tag is used to represent:

a) A text paragraph
b) An image
c) A main heading
d) A link

74. Which property is used to change text color?

a) font-size
b) background
c) color
d) border

75. Which of the following is a valid variable name?

a) 1name
b) name-1
c) name1
d) name space

76. An example of a Generative AI tool is:

a) Microsoft Word
b) ChatGPT
c) Excel
d) Paint

77. The <p> tag is used to display:

a) An image
b) A heading
c) A text paragraph
d) A table

78. An external CSS file is linked to an HTML page using:

a) <style>
b) <script>
c) <link>
d) <meta>

79. What is the function of JavaScript within web pages?

a) Building the page structure
b) Designing the page layout
c) Making the page interactive
d) Storing data

80. The id attribute is used in HTML to:

a) Repeat an element more than once
b) Identify a unique element on the page
c) Change the text color
d) Link a CSS file

81. The function document.getElementById() is used to:

a) Create a new element
b) Delete an element
c) Access an HTML element
d) Resize the page

82. The textContent property is used to:

a) Change the text color
b) Change the text content inside an element
c) Change the font size
d) Hide the element

83. Which element is used to execute an action when clicked?

a) <p>
b) <h1>
c) <button>
d)

84. The onclick event occurs when:

a) The page loads
b) Hovering the mouse
c) Clicking on the element
d) Closing the page

85. The goal of using JavaScript with HTML is to:

a) Increase the page size
b) Add interaction with the user
c) Improve internet speed
d) Store images

86. Which code is correct for changing an element's text?

a) element.text = "Hi"
b) element.textContent = "Hi"
c) element.inner = "Hi"
d) element.changeText("Hi")

87. To change the text size using JavaScript, we use the property:

a) fontColor
b) textSize
c) style.fontSize
d) size.text

88. Which of the following makes the page respond to user actions?

a) HTML only
b) CSS only
c) JavaScript
d) Images

89. What is the benefit of linking a button to JavaScript code?

a) Improving the page layout
b) Adding interaction upon clicking
c) Saving data
d) Running the browser

90. Which of the following is a correct example of an interactive web page?

a) A page containing only text
b) A page with static images
c) A page whose content changes upon clicking
d) A page without buttons

91. Generative AI is used in creating a static web page to:

a) Run the server
b) Suggest HTML and CSS code
c) Run a database
d) Increase internet speed

92. A static page created by AI is characterized by:

a) Content that changes automatically
b) Reliance on user interaction
c) Displaying fixed (constant) content
d) Always requiring JavaScript

93. Generative AI helps create interactive pages by:

a) Writing text only
b) Generating JavaScript code for interaction
c) Deleting page elements
d) Changing the operating system

94. Which element makes a page interactive when used with JavaScript?

a) <p>
b) <h1>
c) <button>
d) <hr>

95. When using AI to create a static web page, you must specify:

a) Internet speed
b) The desired layout and content of the page
c) Processor type
d) Operating system

96. The primary language suggested by AI to build the page structure is:

a) CSS
b) JavaScript
c) HTML
d) Python

97. An interactive page differs from a static page in that it:

a) Contains no text
b) Responds to user actions
c) Does not use code
d) Has fixed content

98. Which of the following is an example of interaction on a web page?

a) Displaying a static image
b) Unchanging text
c) Changing text when a button is clicked
d) A main heading only

99. One of the advantages of using Generative AI to create static web pages is:

a) Increasing complexity
b) Saving time and effort
c) Preventing modifications
d) Reducing page quality

100. The CSS suggested by AI is used to:

a) Write the content
b) Design the page layout/appearance
c) Execute interaction
d) Store data

101. Generative AI can suggest interactive code based on:

a) HTML only
b) CSS only
c) JavaScript
d) Images

102. The primary purpose of creating an interactive web page using AI is:

a) Making the page static
b) Improving user interaction with the page
c) Increasing file size
d) Disabling the user

103. The primary goal of a website presentation is to:

a) Write the code
b) Explain the website's concept and components
c) Launch the website
d) Store data

104. Which of the following is considered an important element in a website presentation?

a) JavaScript code
b) Images illustrating the website interface
c) Database files
d) Server settings

105. The goal of a quiz application is to:

a) Display information only
b) Evaluate the user through questions
c) Design webpages
d) Store images

106. Which element is used to display a question within a quiz application?

a) Image
b) Question text
c) Audio file
d) Video

107. It is preferred that a presentation contains:

a) Long texts only
b) A clear and simple explanation of the site
c) The complete code of the site
d) User data

108. One of the benefits of a good website presentation is:

a) Complicating the site's idea
b) Clarifying the site's idea to the user
c) Reducing the design quality
d) Deleting the site's content

109. A quiz application usually consists of:

a) Images only
b) Questions and answers
c) Videos
d) External links only

110. Which of the following is considered an interaction within a quiz application?

a) Watching an image
b) Reading a text
c) Choosing a correct answer
d) Opening a file

111. A website presentation is often used before:

a) Designing the idea
b) Deleting the site
c) Presenting the project to others
d) Shutting down the site

112. It is good for a presentation to include:

a) The site's appearance and how to use it
b) Programming errors
c) Confidential data
d) System settings

113. When answering a question in a quiz application:

a) The answer is ignored
b) The user's choice is recorded
c) The application closes
d) The question is deleted

114. One of the features of quiz applications is:

a) Lack of interaction
b) Difficulty of use
c) Interaction with the user
d) Displaying static text only

115. What is the primary goal of using Testing in a software application?

A) Increasing the program's execution speed.
B) Discovering errors and ensuring the correctness of results.
C) Improving the user interface (UI) design.
D) Reducing the code size.

116. Which type of testing is used to ensure that each function works correctly in isolation?

A) Integration Testing
B) System Testing
C) Unit Testing
D) User Testing

117. What is the primary role of the ball in a Brick Breaker game?

A) Moving the paddle.
B) Breaking bricks upon collision.
C) Only increasing the game speed.
D) Ending the game immediately.

118. Which Event is often used to move the paddle in a Brick Breaker game?

A) Mouse Click
B) Keyboard Input
C) Timer Event
D) Collision Event

119. Why are tests run after modifying the code?

A) To see what the program looks like.
B) To ensure that modifications did not cause new errors
C) To change the programming language.
D) To delete old functions.

120. What is the expected outcome when a test fails?

A) Ignoring the error.
B) Deleting the program.
C) Identifying the location of the error to fix it.
D) Shutting down the computer.

121. What is the function of the Paddle in a Brick Breaker game?

A) Breaking the bricks.
B) Moving the ball automatically.
C) Preventing the ball from falling off the screen.
D) Ending the level.

122. What usually happens when the ball collides with a brick?

A) The game stops.
B) The brick disappears and the ball's movement is reflected.
C) The paddle disappears.
D) Only the ball's speed decreases.

123. Which of the following is a direct benefit of using testing?

A) Increasing program complexity.
B) Reducing the number of bugs/errors.
C) Increasing file size.
D) Decreasing the accuracy of results.

124. At which stage is it verified that the application works as expected for the end-user?

A) Unit Testing
B) Integration Testing
C) User Acceptance Testing (UAT)
D) Code Writing

125. How is a player's loss determined in a Brick Breaker game?

A) When all bricks are broken.
B) When the ball hits the paddle.
C) When the ball falls below the bottom of the screen.
D) When the ball's speed increases.

126. Which element is responsible for controlling the timing of the ball's movement within the game?

A) The Brick
B) The Paddle
C) The Timer
D) The Keyboard